

The Public's HEALTH

Spring 2003-04

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The Public Health Informatics Initiative

Just what is Informatics? More specifically, what is Public Health Informatics (PHI).

Informatics definitions abound in health communications literature. The RI Department of Health (HEALTH) adopted the one that appeared in the November 2000 issue of the *Journal of Public Health Management and Practice*, in an article written by William A. Yasnoff and others. It states that PHI is “the systematic application of information [technology] and computer science technology to public health practice, research and learning.”

They continue by stating that: “The scope of PHI includes the conceptualization, design, development, deployment, refinement, maintenance, and evaluation of communication, surveillance and information systems relevant to public health.”

*Information is a product,
not a possession.*

Patricia A. Nolan, MD, MPH
Director of Health

Public health Informatics activities include **integration** (linking together a wide variety of surveillance activities), **standardization** (developing and using detailed standards for data elements required to support public health surveillance so information can be easily shared), and **information dissemination** (using the Internet to generate and disseminate information).

“Information is a product not a possession,” declares Patricia A. Nolan, MD, MPH, Director of Health. These words form the core of the Public Health Informatics Initiative HEALTH.

Those working on the Informatics Initiative ensure that HEALTH has a clear, cogent, coordinated and comprehensive approach to the collection, processing, analysis and dissemination of information. To succeed, the concept must be supported from all levels of the Department.

HEALTH collects information about Vital Events (birth, death, marriage), infectious and chronic diseases of public health significance, environmental risks, licensing of health care personnel and facilities, health care services and manpower trends in health care and many other topics. HEALTH derives this information from governmental and non-governmental sources, insurers and the insured, regulators and the regulated, practitioners and their clients. Now and into the future, this information must be stored, managed, analyzed and disseminated in primarily an electronic format that is accessible and understandable to its users. This must occur in a manner that takes customers’ and partners’ needs into account.

Some examples of informatics products include: the HEALTH.ri.gov website—providing easy access to public health information about Rhode Island; the Licensee hookup function on the website—enabling consumers and organizations to confirm license information; and the web-query system (under development) enabling users to create and produce analytical tables from HEALTH survey data.

HEALTH made major strides during the past five years in the Information Technology arena. We have established an Information Technology infrastructure that puts us in a position to meet the ever-increasing information requirements both within the Department and with our external partners.

Lenny Green, MPS

Geographic Information Systems - A Picture is Worth a Thousand Words

In 2001, the RI Department of Health (HEALTH) committed to establishing a Geographic Information Systems (GIS) program that will centralize, expand, and support GIS capabilities throughout our public health surveillance and program activities. GIS is built on technology that supports the geographic organization, analysis, and presentation of information. In the event of a public health emergency, such as a fast-spreading infectious disease or a release of air-borne radioactive material, the importance of GIS shines clear: nearly all scenarios include a geographic component of exposure, impact and response. GIS supports the disease **surveillance**, the emergency **operations** in response, and **communication** to other state and federal agencies, local authorities, and to the public itself.

With funding from the CDC Bioterrorism Preparedness and Response Grant, HEALTH's Office of Health Statistics develops and demonstrates an emergency preparedness and response capacity that builds on the underlying GIS infrastructure in HEALTH and the state. This capacity includes:

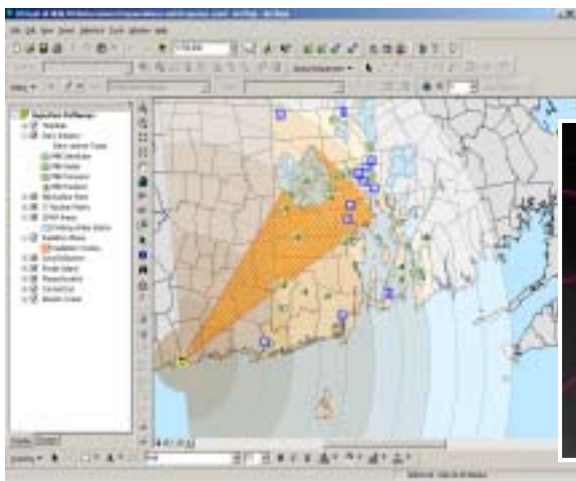
- Computer hardware: Powerful systems capable of processing complex analyses and the displaying of HEALTH's spatial data catalog
- Computer software: All necessary components of the GIS suite of software, fully compatible with

HEALTH's relational database management systems

- Databases: All data layers (files) from the Rhode Island Geographic Information System (RIGIS) catalog, standardized in the latest GIS format, supplemented by other key HEALTH data layers and including GIS data layers for Massachusetts and Connecticut
- Personnel and training: Core administrative and support teams trained in GIS techniques and familiar with key HEALTH data layers, ready to meet the needs for GIS during emergencies
- Emergency operations plan (EOP): A component of the HEALTH EOP and part of a coordinated Decision Support System for emergency preparedness and response

The GIS capacity for emergency preparedness and response was developed in consultation with HEALTH Bioterrorism staff, the Rhode Island Emergency Management Agency, and the RIGIS Consortium. The GIS team tested and refined the system through participation in "tabletops" and exercises, most notably the 2003 Ingestion Pathways Exercise at RIEMA, which involved the use of multi-state databases for a hypothetical release of radioactive airborne materials on the Connecticut coast.

Steve Sawyer



Occupational Health Radiation Control Program



This Scenario represents an incident at a nuclear plant in Connecticut. The Rhode Island and Connecticut Emergency Management, RI Department of Environmental Management, RI Department of Health, the Federal Emergency Management Agency, the Department of Energy--Nuclear Regulatory Commission and Department of Homeland Security participated in this Regional Bioterrorism Exercise. The GIS provided decision support for surveillance, operation and communications during an emergency response through the GIS System, including dissemination of information among various local, state, federal agencies, the media and the public.

RINET-Muni: Linking with Municipalities for Emergency Communication

When an emergency occurs, access to information can make the critical difference in preventing injuries or deaths and managing the crisis. The Centers for Disease Control (CDC) recommends “continuous, high speed connectivity to the Internet and routine use of email for notification of alerts and other critical (emergency) communication” between public health agencies, local governments, hospitals and other partners for responding to public health emergencies.

A consortium of state agencies, including the Departments of Health (HEALTH), and Administration (DOA), Emergency Management Agency (EMA) and Secretary of State (SOS) proposed linking all municipalities together in a high quality, integrated network for computer-based emergency communication and electronic government services. The consortium established four key principles for developing this system: (1) basing emergency communications on systems we use every day, (2) using computer-based communications to supplement other technologies such as phone, fax, and radio, (3) safeguarding the network from failure, tampering or unauthorized use, (4) funding for a minimum four years of operation.

The state contracted with the RI Network for Educational Technology, Inc. (RINET) to implement this project. RINET is a not-for-profit collaborative that provides integrated, network services to public and private schools. The state chose RINET because of more than 10 years experience with operating quality, high speed, dedicated school-based networks in every municipality. By late 2003, RINET also started to bring high quality, integrated network services “to the basement wall” of city and town halls throughout the state. This new service, called RINET-Muni, can be connected with several individual workstations or an internal network established by the municipality.

RINET-Muni also provides a foundation for routine e-government applications such as electronic access to birth records. The Secretary of State plans to use RINET-Muni as the platform for a centralized,

computerized voter registration database, as required by the Help America Vote Act, and to support the electronic filing of public meeting notices and agendas. The consortium envisions multiple other future uses.



Loriann Fox and Jason Albuquerque tap into the RINET-Muni Network in the North Kingstown Town Hall. North Kingstown was the first municipality to work with RINET Muni.

HEALTH funded the complete cost of network startup and, with the consortium, gathered financial support for four years of connectivity at a modest 384K level. Municipalities that require a high volume T-1 (or greater) service will be responsible for the difference in the cost. For emergencies that require interactive video or other higher capacity connections to all municipalities, the consortium will request access to the RINET school network already in place throughout the state.

As of March 26, 2004, all municipalities were either operational or in the process of connecting with RINET-Muni. The next steps include formalizing the consortium of state agencies and implementing a municipal “users group” to identify problems and work out solutions.

Robert J. Marshall, Jr., PhD

The James E. Carney Award Recognizes Public Health Legislation Efforts

RI Department of Health Honors Rep. Steven M. Costantino

On April 28, 2004, the RI Department of Health (HEALTH) awarded the James E. Carney Public Health Legislative Award for 2003 to State Representative Steven M. Costantino. The Carney Award recognizes Rhode Islanders who “have been instrumental in the promotion or enactment of legislation which has advanced the aims or mission of public health.”



Dr. Patricia Nolan, Director of Health; James E. Carney and Representative Steven M. Costantino at Award Ceremony.

HEALTH recognized Rep. Costantino for his active involvement public health legislation particularly in the delivery of affordable, accessible health care.

“Rep. Costantino works tirelessly

to develop consensus on public health issues such as Early Intervention, affordable health insurance and access to health care,” said Patricia A. Nolan, MD, MPH, Director of Health. “Efforts such as these, plus his leadership, tenacity and effectiveness as a public health advocate, represent the best traditions of public service.”

In his remarks acknowledging the award, Rep. Costantino noted that, “HEALTH employees are the unsung heroes in the effort to promote public health in our state. Through your efforts – our citizens will be living longer, healthier and more productive lives.” As

House Finance Chairman, he endorsed the proposed major increase in Rhode Island cigarette taxes noting that the higher cost will reduce the numbers of young folks taking up smoking.

He concluded his remarks with a challenge to all; “We must unite and rally for justice and equality in the American health care system with the same passion and courage that rallied us to move this nation away from segregation...and that each and every American has full and equal access to health care. We deserve and demand nothing less.”

Rep. Costantino was elected to the House of Representatives in 1994 and is the Chairman of the House Committee on Finance—having been a member of that committee since 1999 and served as Deputy Chairman. He co-chairs the DCYF Task Force on System of Care and the Permanent Joint Legislative Committee on Health Care Oversight. He represents District 8 of Providence.

Representative Costantino joins the following distinguished recipients of the James E. Carney Award: 1995-Senator Thomas Izzo, 1996-Representative George Zainyeh, 1997-Representative Nancy Benoit, 1998-Senator Charles Fogarty, 1999-Senator John Chafee, 2000-William Ankner and Edward Walsh, 2001-Paul Caranci and 2002-Senator Elizabeth Roberts.

Helen Drew

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Donald Carcieri, Governor
Patricia A. Nolan, MD, MPH, Director
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*Safe and Healthy Lives in Safe
and Healthy Communities*